



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

H.A

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/802,931

03/18/2004

Kenji Ueda

119094

5169

25944

7590

08/07/2006

OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

PRESTON, ERIK D

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 08/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/802,931

Applicant(s)

UEDA ET AL.

Examiner

Erik D. Preston

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-13 and 15-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12,13 and 15-17 is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/21/2005</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/14/2006 has been entered.

Claim Rejections - 35 USC § 102

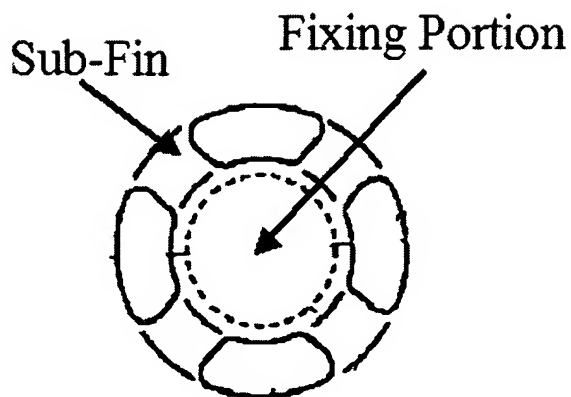
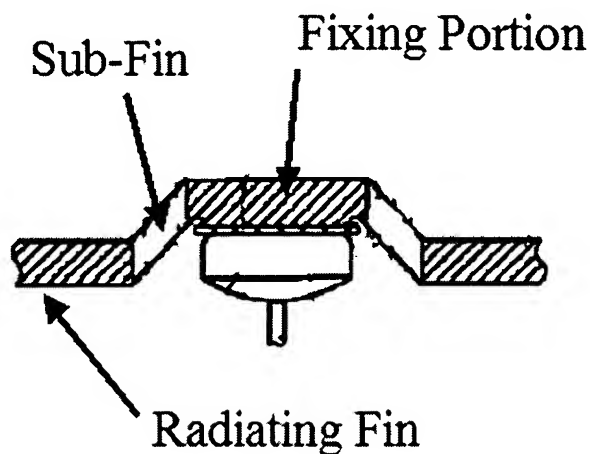
The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1 & 4-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiroyuki (JP 10-056760 supplied by applicant).

With respect to claim 1, Hiroyuki teaches an AC generator, comprising: A rotor (Fig. 1, #2); a stator (Fig. 1, #3) disposed in opposed relation to said rotor; a frame (Fig. 1, #7 & 8) for supporting said rotor and said stator; a rectifier (as seen in Fig. 2) fixedly secured to said frame and equipped with a radiating fin (Fig. 3, #52 & 53) which cools a rectifying element (Fig. 3, #54 & 55) and makes an electrical connection; and a cooling wind generating device (Fig. 1, #26) for sucking cooling wind through said rectifier into the rotor side, wherein said radiating fin includes a fixing portion (of the type as seen in Fig. 7A, #61) to which said rectifying element is fixedly secured and a sub-fin (as seen in Fig. 4B and in the Fig. below) extending radially from said fixing portion toward an

Art Unit: 2834

outer circumferential end portion of said radiating fin observed from a position of said rectifying element (as seen in Figs. 2 & 3), a cooling wind suction side end portion of said sub-fin further protrudes toward a cooling wind suction side with respect to a cooling wind suction side end portion of said fixing portion (as seen in Fig. 3, the sub-fin projects further into the apparatus than the fixing portion of the cooling fin), and said radiating fin has an opening portion (Fig. 4A, #59) surrounded by said fixing portion, said sub-fin, and an outer circumferential portion of said radiating fin.



With respect to claim 4, Hiroyuki teaches the generator of claim 3, wherein the sub-fin has a first wall surface disposed on an outer-diameter side around said rectifying element and a second wall surface disposed on an inner-diameter side to make an angle below 180 degrees with respect to said first wall surface (as seen in Fig. 4B).

With respect to claim 5, Hiroyuki teaches the generator of claim 1, wherein said radiating fin is made of aluminum (Paragraph 25) in a die-casting manner. The requirement that the fin be formed by die-casting is a method limitation and given little patentable weight in a product claim.

With respect to claim 6, Hiroyuki teaches the generator of claim 1, wherein a standing portion protruding toward a cooling wind suction side with respect to a cooling wind suction side end portion of said fixing portion is formed on an inner-circumferential end portion of said radiating fin (as seen in Fig. 3).

With respect to claims 7 & 8, Hiroyuki teaches the generator of claim 1, wherein said radiating fin includes, as two types of radiating fins, a positive electrode side radiating fin, and a negative electrode side radiating fin, a lead portion of said rectifying element fixedly secured to one radiating fin confronts the other radiating fin side and a cooling wind suction side end surface position of the other cooling fin is set on the upstream side along a flow of the cooling wind with respect to a joint position of said lead portion (as seen in Fig. 3), and said sub-fin and said air passage are made in at least one radiating fin located on the upstream side along a flow of the cooling wind and a plurality of protruding portions are formed at a position on the other radiating fin corresponding to said opening portion, said radiating fins are disposed in piles.

With respect to claim 9, Hiroyuki teaches the generator of claim 8, wherein said plurality of protruding portions are formed radially around said rotary shaft of said rotor (as seen in Fig. 3).

With respect to claim 10, Hiroyuki teaches the generator of claim 1, wherein a thickness of said sub-fin corresponding to said rectifying element in an axial direction of said rectifying element is made irregular (as seen in Fig. 4B).

With respect to claim 11, Hiroyuki teaches the generator of claim 1, wherein an output terminal (as seen in Fig. 2) is provided at one end portion of said radiating fin along its circumferential direction, and said sub-fin corresponding to said rectifying element disposed on the other end side along the circumferential direction is made so that its thickness in an axial direction of said rectifying element is larger than a thickness (in the radial direction) of sub-fins corresponding to other rectifying elements (as seen in Fig. 4B).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroyuki (JP 10-056760 supplied by applicant). Hiroyuki teaches the generator of claim 1, but it does not teach that a thickness of said fixing portion in a radial direction is smaller than a thickness of said sub-fin in an axial direction. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to make a thickness of said fixing portion in a radial direction is smaller than a thickness of said sub-fin in an axial

Art Unit: 2834

direction (such as is seen in Larson (US 3198972)) since it has been held that a change in shape is not considered to be patentably distinct if it does not effect the utility of a device (In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966)).

Response to Arguments

Applicant's arguments with respect to claim 1,2 & 4-11 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

Claims 12,13 & 14-17 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

With respect to claim 12, while prior art may teach some of the material included in the claims, it does not teach the combination comprising a second sub-fin having an arc-like configuration formed concentrically with the axis of said rectifying element, said second sub-fin made to divide an air passage surrounded by said fixing portion, said first sub-fin, and the outer circumferential end portion of said radiating fin, said first sub-fin traversing the air passage and the second sub-fin.

Claims 13 & 15-17 are dependent upon the above claim.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erik D. Preston whose telephone number is (571)272-8393. The examiner can normally be reached on Monday through Friday 8-5.

Art Unit: 2834

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571)272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



07/17/2006



DARREN SCHUBERG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2834